

FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

UNITED STATES OF AMERICA,
Plaintiff-Appellee,
v.
ROBERT HERMANEK,
Defendant-Appellant.

No. 99-10092
D.C. No.
CR-94-00427-JLQ

UNITED STATES OF AMERICA,
Plaintiff-Appellee,
v.
ROBERT RUTHERFORD,
Defendant-Appellant.

No. 99-10137
D.C. No.
CR-94-00427-JLQ

UNITED STATES OF AMERICA,
*Plaintiff-Appellee-
Cross-Appellant,*
v.
ANTHONY FLOWERS,
*Defendant-Appellant-
Cross-Appellee.*

Nos. 99-10142
99-10197
D.C. No.
CR-94-00427-1-JLQ

UNITED STATES OF AMERICA,
Plaintiff-Appellee,
v.
SHELDON JOHNSON,
Defendant-Appellant.

No. 99-10143
D.C. No.
CR-94-00427-8-JLQ

UNITED STATES OF AMERICA,
Plaintiff-Appellee,
v.
JERRY FIORILLO,
Defendant-Appellant.

No. 99-10146
D.C. No.
CR-94-00427-12-
JLQ
OPINION

Appeal from the United States District Court
for the Northern District of California
Justin L. Quackenbush, Senior District Judge, Presiding

Argued and Submitted
September 10, 2001—San Francisco, California

Filed May 15, 2002

Before: Henry A. Politz,* William A. Fletcher and
Raymond C. Fisher, Circuit Judges.

Opinion by Judge Fisher

*The Honorable Henry A. Politz, Senior Circuit Judge, United States Court of Appeals for the Fifth Circuit, sitting by designation.

COUNSEL

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Amitai Schwartz, Berkeley, California, for defendant-appellant Anthony Flowers.

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OPINION

FISHER, Circuit Judge:

I. *Overview*

Appellants Robert Hermanek, Robert Rutherford, Anthony Flowers, Sheldon Johnson and Jerry Fiorillo were charged with conspiring to distribute cocaine, possessing cocaine with intent to distribute and related offenses. *See* 21 U.S.C. §§ 846, 841(a)(1). The government alleged that Flowers was at the center of a large-scale cocaine trafficking organization, that Fiorillo and Hermanek were Flowers' suppliers and that Johnson and Rutherford were among Flowers' larger customers. In 1994, agents of the Federal Bureau of Investigation (FBI) and Drug Enforcement Agency (DEA) conducted extensive electronic surveillance of the cocaine trafficking organizations headed respectively by Flowers and another man, Emanuel Lacy, leading to the indictment of appellants and others. Six of those charged, including all five appellants, were joined in one trial. Before trial, appellants unsuccessfully moved to suppress wiretap evidence, charging that the government failed to comply with the recording and sealing requirements codified at 18 U.S.C. § 2518(8)(a).

A four-month jury trial ensued. The government introduced six kilograms of cocaine seized from residences associated with Rutherford and 862 grams of cocaine seized from Flowers' other customers. No substantial quantities of cocaine were seized from any appellant other than Rutherford,

although trace amounts of cocaine or cocaine residue were seized from locations associated with at least one other appellant. Because the probative value of the physical evidence, standing alone, was limited, the government's case relied heavily on wiretapped cellular phone calls in which appellants allegedly discussed cocaine transactions. Although the calls themselves never mentioned cocaine or other drugs by name, the government offered, over appellants' objections, the expert testimony of FBI Special Agent John Broderick to interpret the coded language contained in the conversations as referring to or being consistent with cocaine. Broderick's testimony interpreted not only words commonly used in the drug trade and words he had encountered in other drug cases, but also words he encountered for the first time in this case, such as "Gucci watches" and "cookies," each of which he interpreted as references to cocaine. The defense stressed the ambiguity of the phone calls and the government's failure to seize large quantities of cocaine from appellants other than Rutherford. Appellants contended the phone calls could have referred to lawful conduct or to substances other than cocaine, such as marijuana or steroids.

At the close of evidence, the court directed a verdict of acquittal in favor of Rutherford and Johnson on the conspiracy charges, finding that the government had failed to establish a sufficient link between their possession of cocaine and the Flowers conspiracy.

In closing arguments, prosecutors referred to their own role in the investigation, sometimes using the words "we" and "us" to explain what investigators had found, leading the district court to conclude the prosecutors had improperly vouched for the government's case. The court concluded that the error was harmless, however.

The jury found each appellant guilty of possessing cocaine with intent to distribute and found Hermanek, Flowers and

Fiorillo guilty of conspiracy to distribute cocaine as well. The jury hung as to a sixth defendant.

We address the plethora of issues appellants raise on appeal here and in a concurrently filed memorandum disposition. We hold that the government did not comply with the recording and sealing requirements in carrying out wiretaps of cellular phone and pager communications, but we uphold the district court's denial of appellants' motion to suppress the evidence derived from these wiretaps because the government satisfactorily explained its noncompliance. We agree that the government failed to establish that a portion of Broderick's expert testimony was based on a reliable methodology. The district court did not fulfill its gatekeeping role when it relied only on Broderick's general qualifications and did not assure that his interpretations of particular code words encountered for the first time in this case were supported by reliable methods. Parts of Broderick's testimony should have been excluded under Rule 702 of the Federal Rules of Evidence. We also agree with the district court that the prosecutors' closing arguments vouched for the government's case and improperly blurred the distinction between witness and advocate. The evidence against appellants was strong, however, and we therefore conclude that these evidentiary and vouching errors were harmless.

II. *Wiretaps*

Appellants contend the district court erred by admitting two forms of wiretap evidence: (1) tapes and transcripts of intercepted cellular telephone communications and (2) data gleaned from surveillance of digital display pagers. They argue that the cellular telephone recordings were not immediately sealed as required by federal statute. They also contend the pager interceptions were neither recorded nor sealed as required by law even though recordation was possible through the use of a device known as a pager receiver. They further contend that the government did not satisfactorily explain its

noncompliance, as the statute requires, rendering the wiretap evidence inadmissible. The district court rejected appellants' arguments. We disagree with the district court's rulings that the government complied with the sealing and recordation requirements, but affirm because the government's omissions were satisfactorily explained, precluding suppression.

A. Statutory Requirements

[1] Federal wiretaps are governed by Title III of the Omnibus Crime Control and Safe Street Act of 1968, as amended, 18 U.S.C. §§ 2510-2522.¹ The recording and sealing requirements upon which appellants' challenges depend are set forth in § 2518(8)(a), the operative portions of which require, as a precondition to admissibility, (1) that the government record intercepted communications where "possible"; (2) that the government present such recordings to the district court to be sealed "[i]mmediately" upon the expiration of the order authorizing the surveillance, "or extensions thereof"; and (3), in the absence of compliance with either of these requirements, that the government offer a "satisfactory explanation."²

¹The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA Patriot Act), Pub. L. No. 107-56, 115 Stat. 272, recently granted new authority for government wiretaps, but that Act is not involved here.

²Section 2518(8)(a) provides:

The contents of any wire, oral, or electronic communication intercepted by any means authorized by this chapter shall, if possible, be recorded on tape or wire or other comparable device. The recording of the contents of any wire, oral, or electronic communication under this subsection shall be done in such way as will protect the recording from editing or other alterations. Immediately upon the expiration of the period of the order, or extensions thereof, such recordings shall be made available to the judge issuing such order and sealed under his directions. . . . The presence of the seal provided for by this subsection, or a satisfactory explanation for the absence thereof, shall be a prerequisite for the use or disclosure of the contents of any wire, oral, or electronic communication or evidence derived therefrom under subsection (3) of section 2517.

Our review therefore entails a two-step analysis. First we determine whether the government complied with the recordation and sealing requirements. If the government has not complied, we determine whether it offered a “satisfactory explanation” for its failure to do so. Suppression is required if the government fails to satisfy both steps of the analysis.

We keep in mind that the sealing and recordation requirements are designed to “ensure the reliability and integrity of evidence obtained by means of electronic surveillance.” *United States v. Ojeda Rios*, 495 U.S. 257, 263 (1990). Section 2518(8)(a)’s purpose is, therefore, evidentiary: to establish the admissibility of intercepted communications at trial. *United States v. Clerkley*, 556 F.2d 709, 719 (4th Cir. 1977); *United States v. Daly*, 535 F.2d 434, 442 (8th Cir. 1976).

Motions to suppress are reviewed de novo. *United States v. Wright*, 215 F.3d 1020, 1025 (9th Cir.), *cert. denied*, 531 U.S. 969 (2000). The district court’s factual findings are reviewed for clear error. *United States v. Mattarolo*, 209 F.3d 1153, 1155-56 (9th Cir.), *cert. denied*, 531 U.S. 888 (2000).

B. Cellular Telephone Wiretap

1.

Between May and August 1994, the district court issued four successive 30-day orders authorizing the interception of Flowers’ cellular telephone communications. The first two orders authorized the interception of communications to and from cellular telephone number (415) 407-8340 (“the 8340 wiretap”), the number Flowers was using at the time. After Flowers ceased using the 8340 number, the government obtained two additional, successive orders authorizing interception of the new number Flowers was using, (510) 414-2285 (“the 2285 wiretap”). While the last order was still in effect, the government ceased surveillance and, on September 2, 1994, presented all tape recordings of the 8340 and the

2285 wiretaps to the district court for sealing. The question presented is whether the sealing of the recordings of the 8340 wiretap was timely.

2.

Section 2518(8)(a) requires sealing “[i]mmediately upon the expiration of the period of the order, *or extensions thereof*” (emphasis added). Our analysis turns on whether the 8340 wiretap was extended by the later orders authorizing interception of the 2285 number. Relying on out-of-circuit law, appellants argue that an order authorizing interception of one phone number is not extended by an order authorizing interception of a different number. The government says all of the orders in this case should be viewed as extensions of the first order and, therefore, that sealing of the 8340 recordings was not required until the last order expired. In the alternative, the government argues that even if we adopt the rule of the other circuits holding otherwise, those cases are distinguishable because they involved traditional land lines rather than cellular phones. Differences in cellular technology, the government says, should compel a broader view of extensions here. We agree with appellants.

[2] The Second and Third Circuits have held that a wiretap order authorizing interception at one location or of one phone number is not extended by an order, even if it is part of the same investigation of the same crimes and the same person, authorizing interception at a different location or of a different phone number. *See United States v. Ojeda Rios*, 875 F.2d 17, 21 (2d Cir. 1989), *vacated and remanded on other grounds by* 495 U.S. 257 (1990) (holding “that the term extensions is to be understood in a common sense fashion as encompassing all consecutive continuations of a wiretap order, however designated, where the surveillance involves the same telephone, the *same premises*, the same crimes, and substantially the same persons”) (internal quotation marks omitted); *United States v. Vastola*, 915 F.2d 865, 874 (3d Cir. 1990) (holding that “a

change in the location of an illegal operation will prevent a subsequent order covering the new location from being an extension of a previous order”).

[3] These cases rely on the structure of Title III, which ties wiretap authority to specific communications facilities or locations.³ For instance, the government’s application for authority to intercept communications must include “a particular description of the nature and location of the facilities from which or the place where the communication is to be intercepted.” 18 U.S.C. § 2518(1)(b)(ii). Similarly, before authorizing interception, the judge must assure that “there is probable cause for belief that the facilities from which, or the place where, the wire, oral, or electronic communications are to be intercepted are being used, or are about to be used, in connection with the commission of [the] offense.” *Id.* § 2518(3)(d). We agree with the Second and Third Circuits and hold that an order is an extension of an earlier order only if it authorizes continued interception of the same location or communications facility specified by the prior order.

The government relies on *United States v. Principie*, 531 F.2d 1132 (2d Cir. 1976), for a contrary interpretation. In *Principie*, the Second Circuit held that an order authorizing surveillance at one location was extended by a subsequent order involving a different location, stating: “[t]he [latter] order was clearly part of the same investigation of the same individuals conducting the same criminal enterprise as the

³A cellular phone number is a “communications facility.” Although Title III omits a definition of this term, federal law elsewhere defines “communications facility” broadly as “any and all public and private instrumentalities used or useful in the transmission of writing, signs, signals, pictures, or sounds of all kinds and includes mail, telephone, wire, radio, and all other means of communication.” 21 U.S.C. § 843(b); *see also* U.S.S.G. § 2D1.6 (application note) (providing similar definition); *cf.* *United States v. Duran*, 189 F.3d 1071, 1083 (9th Cir. 1999) (reviewing an authorization in which the specified communications facility was a cellular phone number).

[earlier] order and in these circumstances must be regarded as an ‘extension’ of the earlier order within the meaning of the statute.” *Id.* at 1142 n.14. We find the government’s argument unpersuasive. First, the *Principie* decision involved § 2518(8)(d) — a provision requiring the government to notify the targets of a wiretap within 90 days after termination or extensions of a wiretap order — not § 2518(8)(a). Second, the Second Circuit’s reasoning in *Principie* was based on practical considerations not present here. Providing notification to the target of surveillance would “frustrate the evident intention of the statute to defer notice to the end of the investigation.” 531 F.2d at 1142. The sealing requirement contains no such notification requirement. We see no basis to conclude that sealing amid an ongoing investigation would hamper continued surveillance. Sealing is an ex parte proceeding. Moreover, § 2518(8)(a) separately authorizes the government to produce duplicate recordings for investigatory purposes when the originals are sealed. In short, the policy considerations that animated *Principie* have no application here. Finally, we note that the Second Circuit declined to extend *Principie*’s broad interpretation of extensions to § 2518(8)(a) in its later *Ojeda Rios* decision. 875 F.2d at 22.

[4] The government also contends the *Ojeda Rios/Vastola* analysis should not apply here because cellular telephone technology inherently differs from traditional land lines in two respects: (1) a traditional land-line telephone is wired into the premises and cannot easily be moved and (2) a land-line wiretap necessarily is intertwined with the premises itself, as well as with the persons using the telephone. Identification of these distinctions alone, however, does not establish a basis for treating cellular telephones differently.

[5] Indeed, applying *Ojeda Rios* and *Vastola* to cellular facilities is consistent with the plain language of § 2518(1)(b)(ii) and (3)(d). We think that the word extensions, as it is used in subsection (8)(a), should have a single meaning rather than alternative definitions based on the type

of communications or facility for which surveillance is authorized. By pointing out that cellular telephones may be moved easily, the government perhaps seeks to establish that applying *Ojeda Rios* and *Vastola* to cellular phones would impose administrative burdens on the government that would frustrate surveillance in a manner that Congress could not have intended. This argument, however, is not borne out. There is indeed a burden imposed on the government when a wiretap based on a specific cell phone number is no longer effective. The government must solicit the court for new authority to intercept the new phone number. This burden, however, is imposed by the Title III authorization requirements and exists independent of anything we have to say about the sealing requirement codified in § 2518(8)(a). The government has not explained why it would be burdensome to seal existing records contemporaneous with obtaining authority to wiretap a new facility or location.

Our conclusion that the same meaning of extension should apply to cellular phones is supported by the overall structure of Title III. In 1986, Congress amended Title III to permit “roving” wiretaps. *See* 18 U.S.C. § 2518(11). Under that provision, the government may obtain authority to intercept communications to and from any cellular phone number used by the target of an investigation. Before obtaining such authority, the government must establish that the target would thwart detection from a specified facility or location. When the government makes such a showing, it need not specify a particular communications facility or location at which the surveillance will take place and § 2518(1)(b)(ii) and (3)(d) do not apply. By enacting that provision, Congress “contemplate[d] the roving surveillance of suspects who move from room to room in a hotel or of alleged terrorists who use different telephone booths to avoid surveillance.” *Ojeda Rios*, 875 F.2d at 22. Roving wiretaps are an appropriate tool to investigate individuals, such as Flowers, who use cloned cellular phone numbers and change numbers frequently to avoid detection. The roving wiretap provides the government with

ample latitude to cope with the unique characteristics of cellular technology.⁴

[6] Applying the *Ojeda Rios/Vastola* rule here, we hold that the later orders were not extensions within the meaning of § 2518(8)(a). The recordings of the 8340 wiretap were sealed 39 days after the last authority to intercept that number expired. Under the law of this Circuit, a delay of that length does not constitute immediate sealing. *See United States v. Pedroni*, 958 F.2d 262, 265 (9th Cir. 1992) (holding that a 14-day delay in sealing tapes was not immediate); *see also Vastola*, 915 F.2d at 875 (holding that tapes should be sealed either “as soon as was practical” after the actual surveillance ended “or as soon as practical” after the final extension order expires).

3.

[7] A failure to comply with the sealing requirement, however, does not render the recordings inadmissible if the government offers a “satisfactory explanation” for the absence of timely sealing. To satisfactorily explain a delay, the government must prove that its actual reason for delay was based on an objectively reasonable interpretation of the law. *Ojeda Rios*, 495 U.S. at 266-67; *United States v. Vastola*, 989 F.2d 1318, 1323 (3d Cir. 1993).

The government has explained that it delayed sealing the 8340 recordings because it believed the orders authorizing surveillance of that number were extended by the later orders. As evidence that it so believed, the government points out that it referred to the later orders as “extensions” in the periodic progress reports it filed with the district court during the

⁴We note that the government obtained two separate roving wiretap authorizations here. As all parties concede and the record makes clear, however, the 8340 recordings were produced pursuant to nonroving authorizations.

ongoing surveillance. The government also points out that the district court agreed with the government's view that the later orders were extensions, both during and after the surveillance. Based on this evidence, we conclude that the government's mistaken belief that it could delay sealing the 8340 recordings because the later orders were extensions was its actual reason for delay.

[8] We also conclude that the government's explanation was objectively reasonable. Before today, the meaning of the term extensions was an open question in this Circuit. Only two circuits previously had addressed that question. Moreover, *Principie*, although distinguishable, has not been expressly overruled and it supported the government's theory that extensions have a broader meaning than the one we settle on today. Finally, the government reasonably could have believed that inherent differences between cellular and conventional telephones could have warranted a departure from *Ojeda Rios* and *Vastola* in this case. We therefore affirm the district court's denial of appellants' motion to suppress the 8340 recordings.

C. *Pager Wiretap*

Between March and August 1994, the district court also issued a series of orders authorizing the interception of communications to and from Lacy's and Flowers' digital display pagers. The pager communications intercepted in the Flowers investigation were recorded in a handwritten log. Both investigations also made some attempt to record the intercepted data through the use of a pager receiver computer. Neither the handwritten logs nor the records of the pager receivers were sealed at any time. Appellants contend these failures warranted suppression. The only basis upon which appellants challenge the admissibility of the pager evidence is under § 2518(8)(a); they do not argue inadmissibility on other grounds.

The district court’s finding that the handwritten logs were not “recordings” is a question of law reviewed de novo. *See Wright*, 215 F.3d at 1025. The district court’s finding that recording using pager receivers was not possible is a mixed question of law and fact. We review such questions de novo. *Mayfield v. Woodford*, 270 F.3d 915, 922 (9th Cir. 2001) (en banc).

1.

We address first whether the government was required to seal the handwritten logs. Section 2518(8)(a) requires recordation “on tape or wire *or other comparable device*” (emphasis added). As we have said, the purpose of the recordation provision, as well as the companion sealing requirement, is an evidentiary one — to ensure the reliability and integrity of the contents of intercepted communications. As subsection (8)(a) provides, “[t]he recording . . . shall be done in such way as will protect the recording from editing or other alterations.” We think, therefore, that Congress’ use of the word “comparable” means comparably reliable. Tape and wire recorders ensure reliability because they are mechanical, minimize human involvement and limit the opportunity for intentional alteration and human error — characteristics not readily attributable to handwritten logs. Here, moreover, the logs were made contemporaneously only “where possible.” We therefore agree with the Fourth Circuit that “transcribing by hand in a log book the images appearing on a display pager is not recording on a comparable device within the meaning of” subsection (8)(a). *United States v. Suarez*, 906 F.2d 977, 983 (4th Cir. 1990).⁵

⁵Appellants’ contention that the logs should have been sealed in any event is without merit. Section 2518(8)(a) requires recordation, where possible, and requires sealing only of “*such* recordings” (emphasis added). The handwritten logs were not recordings; thus, sealing was not required.

2.

We turn to whether recording of the contents of the pager interceptions was possible through use of the pager receivers. When properly programmed, the pager receiver is tuned to the frequency of a pager and receives a data stream from the pager company containing the digital display message, the date and time of the message and a code relating to the pager. The receiver has the capacity to store the data streams in an “archive” file on its hard drive that can be printed or transferred to a storage device such as a floppy disk. Although pager receivers were a relatively new technology in 1994, appellants offered undisputed evidence that they were employed effectively by the San Francisco office of the FBI — the same office leading the Flowers investigation — in its so-called “North Beach” investigation both before and during the Flowers and Lacy investigations. Agents in that investigation reliably intercepted pager messages, printed the contents of the archive file and sealed them in accordance with § 2518(8)(a). Based on this record, we conclude that the district court erred by concluding that recordation through the use of the pager receivers was not possible. The record here indicates that the pager receivers were comparable devices within the meaning of § 2518(8)(a).⁶

⁶The district court found that the pager receivers were not comparable devices in part because they were “not reliable and [were] prone to error.” We disagree. The most serious problem was the FBI’s failure to program the Flowers pager receiver accurately. Nothing in the record, however, indicates that this problem made recording impossible or made the pager receiver an inherently unreliable form of recordation. Indeed, the FBI’s successful use of the pager receiver in the North Beach investigation demonstrates that pager receiver recordation was both possible and practical. Most of the other problems encountered by the agents, including power failures and printer malfunctions, also appear to have been surmounted in the North Beach investigation. Agents also cited difficulty intercepting communications made in the East Bay from a pager receiver located in San Francisco. We do believe that a geographic limitation on the technology could be relevant to the inquiry. The North Beach investigation presumably concerned San Francisco’s North Beach neighborhood, and is therefore distinguishable from the Flowers and Lacy investigations, which took place in Oakland. But the record does not indicate any details about this problem or inform us, for instance, whether pager receivers are mobile. We thus conclude that, on the record before us in this case, this limitation does not affect our conclusion that recordation was possible.

Decisions holding recordation of digital display pager interceptions impossible are distinguishable. In *Suarez*, the Fourth Circuit held that recordation was impossible, but considered only handwritten logs and did not discuss pager receivers at all. 906 F.2d at 983-84. In *United States v. Paredes-Moya*, 722 F. Supp. 1402 (N.D. Tex. 1989), *rev'd in part and aff'd in part on other grounds by United States v. Guerra-Marez*, 928 F.2d 665 (5th Cir. 1991), the court found that the recording device that the DEA attempted to use (presumably a pager receiver) was a relatively new technology that failed to work, and that defendants had failed to show that there was a device available that the government intentionally or otherwise failed to use. *Id.* at 1407. Here, the North Beach investigation demonstrates otherwise.

3.

We nonetheless conclude that the government offered a “satisfactory explanation” for its omissions because the government’s belief that pager receivers were not recorders within the meaning of § 2518 was objectively reasonable in light of the decisional law we have just cited. The record also indicates that the agents running the investigation became aware of the full capacity of the receivers to receive and store messages only after the surveillance was terminated. The district court’s denial of appellants’ motion to suppress the digital display pager evidence therefore is affirmed.

III. *Expert Testimony*

During the course of trial, Agent Broderick testified for approximately 14 days. Broderick was the lead investigator in the case and also served as the prosecution’s main witness. He gave expert testimony on the *modus operandi* of cocaine enterprises and interpreted many of the over 200 intercepted telephone communications the government introduced as evidence. Appellants challenge two portions of Broderick’s testimony under Rule 702 of the Federal Rules of Evidence. They

concede that Broderick was qualified to testify regarding the coded meanings of words commonly used in the narcotics trade (for instance, that “boy” is a common slang term for “heroin”). They also do not challenge Broderick’s interpretation of words encoded by a common form of drug trade “pig Latin” (putting the phrase “izn” or some variation in the middle of a word, converting, for instance, “one” into “wizone” and “chopper” into “chiznopper”). Rather, appellants contend that it was error to permit Broderick to interpret words and phrases not commonly used in the drug trade that he encountered for the first time in this case. Appellants challenge most strongly Broderick’s interpretation of new words and phrases as referring to or being consistent with cocaine. They also argue that Broderick’s interpretation of numbers as references to quantities and prices of cocaine were unreliable. We agree that the district court did not establish sufficiently the reliability of Broderick’s methods for interpreting new words as code for cocaine. We see no error, however, in the district court’s admission of Broderick’s interpretation of numbers.

A.

Before Broderick testified, the government filed an offer of proof to establish his qualifications to testify as an expert. The offer covered several subjects not challenged here, including Broderick’s general expertise in the area of drug terminology, his familiarity with the pig-Latin code and his competence to render opinions on the *modus operandi* of drug traffickers. The offer also discussed Broderick’s qualifications to interpret numbers as references to prices and quantities of cocaine and to interpret coded language as being consistent with cocaine trafficking.

The offer identified several systems for encoding the prices of cocaine, including for example referring to \$15,500 as “fifteen-five” or as “fifty-five” and referring to dollar amounts as streets, such as “Fifteenth Street.” The offer stated that Broderick had seen these dollar and street codes in other

cocaine trafficking cases in the San Francisco Bay area, and cited some 25 examples from the wiretap transcripts in which these systems were used.

The offer also sought to establish Broderick's qualifications to interpret "slang terms and street terminology commonly used in the narcotics trade." Listing some 40-odd terms, the offer stated that "Special Agent Broderick will testify that he is familiar with the use of the[se] terms from his participation in narcotics trafficking investigations, from his discussions with other narcotics investigators, and from his debriefings of informants and defendants involved in the narcotics trade."

Based on this offer and several in limine hearings, the district court ruled that a government expert, if qualified on the stand, could interpret the words and phrases used in the wiretapped conversations. Addressing the question of words experienced for the first time in this case, the court ruled over defense objection that: "The agents or witnesses need not state that the exact word is clearly established in the drug world to mean a specific drug term. It is permissible . . . for the witness to testify that words such as this are commonly used in the drug trafficking world." The court ruled that the expert could interpret the meanings of such words based on "his experience" and on the "context" in which the word was used. Having thus established the scope of permissible testimony, the court deferred to trial a determination of whether any witness in particular was qualified as an expert.

Broderick subsequently was qualified in the presence of the jury. The government proffered him as qualified to interpret drug code based on eight years' experience as an FBI agent, approximately five to six years of experience investigating cocaine and heroin trafficking in Oakland, transcription of approximately 500 wiretapped conversations in a previous case and 500 more in this case, observation of over 20 controlled purchases of narcotics and discussions with law enforcement agents and informants regarding the meanings of

drug terminology, code words and dollar amounts. The government did not ask, and the district court did not require, Broderick to explain his methodology for interpreting code words he had not encountered before this case.

Defense counsel then were given the opportunity to voir dire Broderick. They pressed Broderick on his bases for interpreting code words encountered for the first time in this case. Broderick explained that he interpreted new words based on “context,” including: (1) “my knowledge of the defendants”; (2) “my previous investigation of these individuals”; (3) “my analysis of [all of] these calls”; (4) “the evidence seized” in the case; and (5) what informant Willie Young told him about Young’s own conversations with Flowers. Broderick explained that Young had given information to investigators regarding the meaning of one or more intercepted communications he had with Flowers. Young first told investigators that a phone call using the words “wizone” and “52” involved his purchase of a pound of marijuana from Flowers for \$5200. Young later told investigators, consistent with the government’s theory of the case, that the same call that he initially said referred to marijuana actually referred to a transaction involving one kilogram of cocaine at a price of \$15,200. During the voir dire, Broderick conceded that “there are variations in [the meanings of] particular words depending on the speakers” and “[t]he context of the call.” The district court ultimately ruled, over defense objection, that Broderick was qualified to interpret the wiretapped conversations in conformance with the court’s prior rulings.

Some of Broderick’s subsequent expert testimony did involve interpreting code words and phrases he encountered for the first time in this case. Most of these interpretations involved words and phrases that Broderick translated as referring to cocaine. For example, Broderick interpreted “nina,” “cookies,” “Gucci watches,” “thing” and “street” as cocaine; “ass zippers” as ounces of cocaine; “all solid one thing” as a kilogram of cocaine in its original wrapper; two “microwaves

under the sink” as two kilograms of cocaine; “one” as an ounce of cocaine; “wizone” as one kilogram of cocaine; “it’s all good” as referring to the availability (not the quality) of cocaine; “put the kids to bed” as storing cocaine; “quizno” as a quarter kilogram of cocaine; “zip” as an ounce of cocaine; and “funny stuff” as cocaine (not marijuana). Some words and phrases were interpreted not as cocaine, but as associated with drug trafficking. For example, Broderick translated “things” as firearms; “thing” as a narcotics transaction; “he better not serve my people” as “he better not sell narcotics to my people”; “on the front” as drugs on consignment; and “mail” as money.

Many of these words were not on the list of terms included in the government’s offer of proof. Moreover, although the offer of proof had referred to terms that were “commonly used” and that Broderick was “familiar with,” Broderick was forced to concede on cross examination that he had never heard one of the listed words used as a reference to cocaine before. Specifically, Broderick testified on direct examination that he was familiar with the term “Gucci watches” and that it was consistent with cocaine, but then acknowledged during cross examination that he had never heard that particular term used before in the context of the drug trade.

Broderick also interpreted code regarding amounts and prices of cocaine discussed in the wiretapped conversations, converting numbers into dollar amounts based on his knowledge of the prevailing price for cocaine during the relevant time period. Consistent with the offer of proof, Broderick identified a code whereby the number “39” meant \$13,900 and “65” meant \$16,500 for a kilogram of cocaine and so on. On occasion, however, Broderick’s interpretations departed from the established code, giving inconsistent results. For instance, “55” meant \$550, not \$15,500, because the speaker “is an ounce dealer of cocaine,” whereas “55th” meant \$15,500. Broderick interpreted the number “39” as \$13,900 in one conversation but \$3900 in another. In interpreting one

phone call, Broderick interpreted references to “East 16th” and “East 18th” as \$16,000 and \$18,000, but interpreted a reference to “55th” as \$15,500, not \$55,000. At various points in his testimony, Broderick interpreted references to “55th,” “155” and “5-1/2” all as \$15,500. The same number could refer to different amounts based on the context, especially the identity of the participants in the conversations.

B.

The district court’s decision to admit or exclude expert testimony is reviewed for an abuse of discretion and will not be reversed unless “manifestly erroneous.” *United States v. Hankey*, 203 F.3d 1160, 1167 (9th Cir.), *cert. denied*, 530 U.S. 1268 (2000) (internal quotation marks and citation omitted). Rulings regarding the admission of expert testimony are reviewed for harmless error. *United States v. Morales*, 108 F.3d 1031, 1040 (9th Cir. 1997).

C.

Appellants contend that the government failed to establish a reliable basis for Broderick’s interpretations of words and phrases he encountered for the first time in this case as referring to cocaine. Although Broderick might have been able to establish a reliable basis for so interpreting these words, we agree that the record fails to demonstrate that he did.

Rule 702 assigns to the district court the role of gatekeeper and charges the court with assuring that expert testimony “rests on a reliable foundation and is relevant to the task at hand.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993); *see also* Fed. R. Evid. 104(a). The gatekeeper role “entails a preliminary assessment of whether the reasoning or methodology underlying the testimony is . . . valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Daubert*, 509 U.S. at 592-93. In *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999), a

decision reached after the district court's rulings here, the Supreme Court made clear that the district court's duty to act as gatekeeper and to assure the reliability of proffered expert testimony before admitting it applies to all (not just scientific) expert testimony.

Although the district court is granted broad discretion in determining how to satisfy its gatekeeping duty, *id.* at 152, we conclude that function was not fulfilled here, perhaps understandably because the district court did not have the benefit of *Kumho* at the time. Neither the government's offer of proof nor the qualification of Broderick on the stand established that his interpretations of new words and phrases as references to cocaine were supported by reliable methods.

By its own terms, the offer of proof describes only Broderick's method for interpreting words "commonly used" in the drug trade — i.e., words with which Broderick was "familiar." It therefore offers no basis for assessing the reliability of Broderick's interpretation of words and phrases encountered for the first time in this case. Our concerns about the offer of proof are magnified, moreover, because at least one of the words listed on the government's offer under the rubric of "commonly used" drug terms with which Broderick was "familiar" — "Gucci watches" — was not familiar to Broderick. The overstatement of the offer carried over into Broderick's direct testimony. On direct, Broderick testified that he was familiar with the term "Gucci watches" and that the term was "consistent with cocaine." On cross examination, however, Broderick conceded that he had never heard the word used before in prior cases as a reference to drugs. The offer also failed to include many of the terms that Broderick later purported to interpret.

Broderick's qualification on the stand also did not establish that his interpretations of new words and phrases were supported by reliable methods. The government offered only Broderick's general qualifications — his extensive experience

and knowledge of drug terminology based on several years investigating the cocaine trade in the Bay Area and interpreting hundreds of intercepted communications. These qualifications are relevant, but, standing alone, they neither explain nor establish the reliability of Broderick's interpretations of new words and phrases. It is well settled that bare qualifications alone cannot establish the admissibility of scientific expert testimony. *See Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1315 (9th Cir. 1995) (holding that expert testimony was inadmissible based on its unreliable methodology notwithstanding "the impressive qualifications of plaintiffs' experts"). After *Kumho*, that proposition indisputably carries over to nonscientific expert testimony as well. *See Kumho*, 526 U.S. at 153 ("The District Court did not doubt [the expert's] qualifications. . . . Rather, it excluded the testimony because, despite those qualifications, it . . . found unreliable[] the methodology employed by the expert . . . and the scientific basis, if any, for such an analysis.") (internal quotation marks omitted).

The district court relied solely on Broderick's general qualifications without requiring the government to explain the method Broderick used to arrive at his interpretations of words he had never encountered before. This was error. As a prerequisite to making the Rule 702 determination that an expert's methods are reliable, the court must assure that the methods are adequately explained. *See Daubert*, 43 F.3d at 1319 (holding that the expert must "explain the methodology . . . followed to reach [his or her] conclusions"); *Claar v. Burlington N. R.R. Co.*, 29 F.3d 499, 502 (9th Cir. 1994) ("[T]he district court repeatedly ordered the experts to explain the reasoning and methods underlying their conclusions. . . . [Because the experts'] affidavits are devoid of any such explanation . . . the district court could not make the findings required by Rule 702[.]"); *United States v. Rincon*, 28 F.3d 921, 924 (9th Cir. 1994) (explaining that the methods used by the expert must be described "in sufficient detail" such that the district court can determine if they are reliable); Fed. R.

Evid. 702 advisory committee's note (2000) ("The trial judge in all cases of proffered expert testimony must find that it is properly grounded, well-reasoned, and not speculative before it can be admitted. The . . . expert must explain how the conclusion is so grounded."). As we said in *Daubert*, "[w]e've been presented with only the expert['s] qualifications, [his] conclusions and [his] assurances of reliability. Under *Daubert*, that's not enough." 43 F.3d at 1319.

The only attempt made to explain Broderick's method emerged during voir dire questioning by defense counsel. Assuming *arguendo* that Broderick's explanation on voir dire — rather than the government's offer of proof and Broderick's general qualifications — formed the basis of the district court's decision admitting the testimony, we nonetheless find this explanation inadequate. The factors Broderick identified — his knowledge and prior investigation of defendants and the "evidence seized" in the case — were too vague and generalized to satisfy the requirements of Rule 702. Under Rule 702, the proffered expert must establish that reliable principles and methods underlie the particular conclusions offered — here, the interpretation of particular words as referring to cocaine. As the Supreme Court stated in *Kumho*, the expert must establish the reliability of the principles and methods employed "to draw a conclusion regarding *the particular matter to which the expert testimony was directly relevant*." 526 U.S. at 154. Broderick failed to explain in any detail the knowledge, investigatory facts and evidence he was drawing from. In *United States v. Hankey*, by contrast, we approved of a law enforcement expert's testimony that two witnesses were affiliated with gangs where the expert explained in detail the nature of his personal knowledge and explained the connection between that knowledge and the particular conclusion that the witnesses were gang members. 203 F.3d at 1168-70. Even if Broderick had explained in detail his knowledge of defendants — such as knowledge that they were involved in cocaine trafficking — he would have been required to establish how he applied that knowledge to interpret particular

words and phrases used in particular conversations.⁷ Without a link between Broderick's knowledge and the particular matter he interpreted, "there is simply too great an analytical gap between the data and the opinion proffered." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

Broderick's reliance on informant Young also fails to establish reliability. First, Broderick's discussions with Young — in which Young initially identified his conversation with Flowers as involving marijuana and only later adopted the government's interpretation that the call involved cocaine — indicate that appellants' conversations were susceptible to various interpretations, even when one of the participants in the call (Young) served as the interpreter. Young's difficulty decoding his own conversation undermines our confidence that Broderick could do so. Second, Young's opinion that "wizone" referred to a kilogram of cocaine in one conversation does not indicate that other words in other conversations also referred to kilograms of cocaine. Like Broderick's asserted knowledge of appellants and of the "evidence seized" in the case, there is too great an analytical gap between Broderick's information and the particular matter at issue.

The government relies on our decision in *United States v. Plunk*, 153 F.3d 1011 (9th Cir. 1998), *amended by* 161 F.3d 1195 (9th Cir. 1998). In *Plunk*, we upheld expert testimony by a New York City police detective, Jerry Speziale, who interpreted for the jury various encoded conversations between Plunk and his fellow drug traffickers. We upheld testimony in

⁷Although the district court's discretion in how to carry out its gatekeeping function is broad and the court is not required to make the Rule 702 determinations in a separate, pretrial hearing, outside the presence of the jury, *United States v. Alatorre*, 222 F.3d 1098, 1102 (9th Cir. 2000), the potentially prejudicial qualifying testimony presented in this case should have been presented outside the presence of the jury. *Cf. Hankey*, 203 F.3d at 1166 (observing that court considered agent's proffered testimony that witnesses were gang members in a Rule 104(a) hearing outside the jury's presence).

Plunk of the sort objected to here. Speziale testified, for example, that the intercepted phrases, “How hungry is Panchito? Would he like to have breakfast?” meant “that Pancho could meet in the morning to be loaded with the cocaine.” *Id.* at 1018. According to Speziale, Plunk’s recorded statement that “maybe I can take some documents with me” meant that Plunk hoped to bring home money from a Los Angeles meeting. *Id.*

Plunk dealt with two distinct issues: whether detective Speziale was qualified under *Daubert* and Rule 702, and whether Speziale’s testimony, including the excerpts cited above, violated Rule 704(b). Answering the first question, we held *Daubert* did not apply — a holding later abrogated by *Kumho* — and held the district court was well within the bounds of its discretion in qualifying Speziale “as an expert and allowing him to testify as such regarding the cryptic codes and jargon of narcotics dealers.” *Id.* at 1017. *Plunk*’s first holding, therefore, did not address whether the district court fulfilled its *Daubert* gatekeeping role under Rule 702, the issue raised by appellants here. Moreover, *Plunk*’s Rule 702 analysis was limited to the “threshold matter” of whether Speziale “should not have been allowed to testify as an expert at all.” *Id.* at 1016. Accordingly, we held Speziale was qualified to give *modus operandi* opinions; we did not address whether the specific testimony excerpted above was reliable under Rule 702. *See id.* at 1017 (“[T]he jargon of the narcotics trade and the codes that drug dealers *often use* constitute specialized bodies of knowledge . . . and are therefore proper subjects of expert opinion.”) (emphasis added); *id.* (approving of the district court’s conclusion that Speziale was qualified to testify regarding “how drug trafficking is sometimes conducted and speak to the methods and techniques that may be employed”).

Answering the second question, we held only that Speziale’s testimony offering his opinion about the meaning of drug jargon, “allowing the jurors to determine for themselves

the legal significance of the conversations as interpreted,” did not violate Rule 704(b), which prohibits an expert witness from testifying as to whether the defendant had the mental state constituting an element of the crime.⁸ *Id.* at 1018. *Plunk*’s Rule 704(b) holding does not control appellants’ Rule 702 contentions, particularly post-*Kumho*, and therefore does not rescue Broderick’s testimony.

We do not hold that a government expert, including Broderick, can never be qualified to interpret coded drug conversations using words and phrases experienced for the first time in the prosecution at issue. The advisory committee’s note to Rule 702, as amended in 2000, approves such expert testimony where the “method used by the agent is the application of extensive experience to analyze the meaning of the conversations.” Here, the government focused on Broderick’s experience but failed to explain his methodology for interpreting new words. That concern is compounded by Broderick’s general and vague statements on voir dire that he interpreted such words based on his knowledge of the defendants. From our review of the record, Broderick appears at times to have interpreted cryptic language as referring to cocaine simply because he believed appellants to be cocaine traffickers. Such circular, subjective reasoning does not satisfy the Rule 702 reliability requirement.

We nonetheless conclude that the error, although serious, was harmless when viewed in context. For errors of nonconstitutional magnitude, the government must show that the prejudice resulting from the error was more probably harmless than not. *United States v. Mett*, 178 F.3d 1058, 1066 (9th Cir. 1999). This requires a showing of a “fair assurance” that the judgment was not substantially swayed by the error. *Id.*

⁸Appellants contend that Broderick’s testimony about what words “meant” in the context of particular conversations also violated Rule 704(b). That argument is foreclosed by *Plunk*. See 153 F.3d at 1018.

The scores of taped conversations introduced as evidence unmistakably referred to transactions in contraband. The district court concluded that “those tape recordings, what those defendants were saying to each other, I feel, made out a strong case against them of drug conspiracy and possession with intent to distribute cocaine.” Appellants contend that the conversations could have referred to substances other than cocaine, such as marijuana or steroids. This argument might be persuasive if the other evidence in the case did not point convincingly to cocaine. Some taped conversations, although not mentioning cocaine by name, included references unique to cocaine. For instance, some conversations referred to a substance that was “rocked up.” The government elicited undisputed testimony that the only illegal substance that is “rocked up” is cocaine. References to “straight white” and “cool white” in taped conversations support the conclusion that the calls referred to cocaine, which is white in color. Two of Broderick’s most disputed interpretations, moreover, were supported by testimony of another government expert, DEA Agent Maura Gaffney, whose testimony appellants do not challenge in this appeal. Agent Gaffney testified, based on her experience, that the Gucci and Toyota logos are commonly used on cocaine packaging to indicate high quality.

In one instance, Broderick’s interpretations were corroborated by events. In one phone call, a man named Williams was heard telling Flowers to “bring me about five of them.” Broderick interpreted this call as an order for five ounces of cocaine. Later that day, police observed Williams tossing from a car a bag containing three ounces of cocaine. The next day, Flowers and Johnson were overheard talking about the arrest of Williams, with Johnson reporting to Flowers that Williams “had to toss a couple of little cookies.” The ounces of cocaine linked to Williams supports the conclusion that the words “five of them” and “cookies” referred to ounces of cocaine.

The physical evidence in the case also pointed to cocaine. As appellants acknowledge, the government seized from resi-

dences associated with Flowers' customers 862 grams of cocaine and crack cocaine; nine narcotics distribution scales, some of which contained cocaine residue; and cooling utensils caked with crack cocaine. Six kilograms of cocaine were seized from residences associated with Rutherford. Although that cocaine was not successfully linked to the conspiracy, wiretap evidence did indicate that Rutherford was one of Flowers' larger customers. Rutherford's possession of large quantities of cocaine therefore supports the conclusion that the wiretaps referred to cocaine. In addition, trace amounts of cocaine were seized from locations associated with at least one other appellant.

Given the incriminating nature of the voluminous wiretap evidence and the other indicators that appellants' dealings involved cocaine, we are persuaded that it is more probable than not that Broderick's erroneously admitted interpretations as references to cocaine and cocaine trafficking did not affect the verdict. We therefore conclude that the erroneous admission of Broderick's interpretations of new words and phrases was harmless.

D.

We find no error in the district court's admission of Broderick's testimony translating coded numbers into quantities and prices of cocaine. The government's offer of proof on this subject adequately explained the method used to decode these numbers and exemplified how that method comported with the numbers' use throughout the wiretapped conversations. Although Broderick sometimes assigned different meanings to the same number, Broderick adequately explained his reasons for departing from the usual code. Inconsistent results may be an indicator of unreliability, *see Daubert*, 509 U.S. at 590 n.9 (observing that the "reliability" inquiry asks, "does application of the principle produce consistent results?"), but an expert is not required to apply a system of decryption

inflexibly in the face of data indicating that the suspects utilized coded numbers elastically to suit a variety of contexts.

IV. *Vouching*

Appellants contend the prosecutors' closing arguments impermissibly vouched for the credibility of government witnesses, spoke as if from personal knowledge and referred to facts not presented at trial. We first decide whether vouching occurred and then determine whether the error warrants reversal. *United States v. Garcia-Guizar*, 160 F.3d 511, 520 (9th Cir. 1998). Where defense counsel objects at trial to acts of alleged prosecutorial misconduct, as done here, we review for harmless error on defendant's appeal. *United States v. Hinton*, 31 F.3d 817, 824 (9th Cir. 1994).

A.

During closing and rebuttal arguments, prosecutors portrayed themselves as part of the team conducting the criminal investigation. On at least 19 occasions during approximately three days of closing argument, prosecutors referred to the government's investigation of Flowers and Lacy using the terms "we" and "us." For instance, in rebuttal argument, the prosecutor supported the integrity of the government's wiretaps:

Wiretaps are very carefully controlled and every ten days we have to submit a periodic report to the judge. You saw the periodic reports. Every 30 days we have to get an extension, convince the judge that we have good reason to keep the wiretaps going.

Prosecutors pointed out that they were personally involved in making investigatory decisions and guiding the investigation — "we went ahead and requested the search and arrest warrants"; "We had a wiretap. We selected a particular phone . . ."; "We didn't find any cocaine in [Johnson's] house"; "we

were able to identify Jerry Fiorillo as the person speaking on the clone phone . . .” — and that the joint efforts of investigators and prosecutors were well intentioned — “For every day we didn’t know something, for every day we didn’t arrest somebody when we could have, we got one more piece of the overall puzzle to bring you”; “Everything we did was designed to bring you the entire case.” In denying Flowers’ new trial motion, the district court stated that he thought prosecutors had “vouched for the case,” but nonetheless did not think the conduct warranted a new trial. The court did not

find that it’s so infected the case that impression as left as would warrant a new trial. And it may well be that three new judges viewing the cold record and the cold words as there on the transcript may feel that not only was this a close case, but that that form of presentation constituted inappropriate vouching for the case. That the government lawyer was vouching what “we did” in this case warranted a return of a guilty verdict.

Improper vouching typically occurs in two situations: (1) the prosecutor places the prestige of the government behind a witness by expressing his or her personal belief in the veracity of the witness, or (2) the prosecutor indicates that information not presented to the jury supports the witness’s testimony. *United States v. Edwards*, 154 F.3d 915, 921 (9th Cir. 1998). We also have identified improper vouching and related misconduct in a broader range of circumstances. A prosecutor may not, for instance, express an opinion of the defendant’s guilt, *United States v. Molina*, 934 F.2d 1440, 1444 (9th Cir. 1991), denigrate the defense as a sham, *United States v. Sanchez*, 176 F.3d 1214, 1224 (9th Cir. 1999), implicitly vouch for a witness’s credibility, *United States v. McKoy*, 771 F.2d 1207, 1211 (9th Cir. 1985), or vouch for his or her own credibility, *United States v. Smith*, 962 F.2d 923, 933-34 (9th Cir. 1992).

We also have recognized the “advocate-witness” rule, which prohibits an attorney from appearing as both a witness and an advocate in the same litigation. *United States v. Prantil*, 764 F.2d 548, 552-53 (9th Cir. 1985). This rule may be violated when the prosecutor was involved in the investigation and the prosecutor’s credibility is therefore placed before the jury, even where the prosecutor does not actually take the stand. *See Edwards*, 154 F.3d at 923 (“[W]hen a prosecutor is personally involved in the discovery of a critical piece of evidence [and] when that fact is made evident to the jury . . . the prosecutor’s participation in the trial of the defendant constitutes a form of improper vouching.”).

The rule against vouching and the advocate-witness rule “were designed to prevent prosecutors from taking advantage of the natural tendency of jury members to believe in the honesty of lawyers in general, and government attorneys in particular, and to preclude the blurring of the ‘fundamental distinctions’ between advocates and witnesses.” *Edwards*, 154 F.3d at 922; *see also United States v. Sayakhom*, 186 F.3d 928, 943 (9th Cir. 1999) (stating that the policies underlying the advocate-witness rule “‘are related to the concern that jurors will be unduly influenced by the prestige and prominence of the prosecutor’s office and will base their credibility determinations on improper factors’ ”) (quoting *Edwards*, 154 F.3d at 921).

We conclude that the prosecutors’ use of the words “we” and “us” to refer to steps taken in the investigation ran afoul of these rules. By identifying themselves as participants in the criminal investigation during closing arguments, the prosecutors assumed a witness-like role in addition to serving as advocates. *See Prantil*, 764 F.2d at 553 (expressing concern over the “very real risk that the jury . . . may accord testimonial credit to the prosecutor’s closing argument” when the line between prosecutor and witness is blurred). Their statements conveyed to the jury a message that prosecutors “personally believed, based on [their] own observations,” in the integrity

and good faith of the investigation. *Edwards*, 154 F.3d at 922. Prosecutors placed the prestige of the government and the United States Attorney's Office behind the testifying investigators and behind the credibility of the investigation. Prosecutors also implicitly bolstered the credibility of several government witnesses who testified about the investigation, including, most notably, Agent Broderick.

B.

Appellants also contend that prosecutors repeatedly argued in a manner conveying the impression their statements were based on their own expertise investigating cocaine trafficking and their own personal knowledge as members of the investigatory team. They say that prosecutors interpreted ambiguous language in intercepted telephone communications as involving cocaine, phrasing such interpretations as if they were based on their own expertise and knowledge rather than the evidence introduced at trial. Appellants cite, for example, the prosecutor's statement, during closing argument, in which he interpreted conversation in a telephone call as involving cocaine:

Mr. Flowers says: "I ain't had nothing different, blood. Everything that you all been getting all week be the exact same thing."

This call is cocaine. Every bit of cocaine you've been getting all week has been the same quality of cocaine.

In another example during closing argument cited by appellants, the prosecutor discussed a phone call in which an individual said he had "rocked up nine" and "sacked them all up in powder." Appellants contend that by interpreting the call as referring to cocaine the prosecutor gave the impression that his interpretation was based on his personal knowledge and expertise: "The only drug that you'd rock up nine of, sack up

in powder and cook is cocaine. . . . This conversation is indisputably about cocaine.” The district court found such references troubling:

[W]hen you say as the representative of the government in this case to the jury: “This was a cocaine transaction,” from these tape recordings which are the evidence, I fear that the jury is listening to you as the representative of the government and not focusing on what is, in fact, the evidence.

The court expressed its concern that the jury would

accept a statement by an Assistant United States Attorney as the gospel, as the fact But it’s these blanket statements: “This is cocaine. This person is a cocaine dealer.” And it’s not just a matter of semantics I think it’s an important matter as far as the fairness of our entire system.

Although a close call, we conclude that the prosecutors’ statements about whether phone calls referred to cocaine did not cross the line of impropriety. During closing argument, “[p]rosecutors have considerable leeway to strike ‘hard blows’ based on the evidence and all reasonable inferences from the evidence.” *United States v. Henderson*, 241 F.3d 638, 652 (9th Cir. 2000), *cert. denied*, 532 U.S. 986 (2001); *see also Drayden v. White*, 232 F.3d 704, 713 (9th Cir. 2000) (noting that “the prosecutor’s statements were supported by the evidence and reasonable inferences that could be drawn from the evidence”), *cert. denied*, 532 U.S. 984 (2001).

We recognize a danger that the jury will perceive an argument as an attempt to inject the prosecutor’s personal knowledge into the case. *See McKoy*, 771 F.2d at 1211 (“Even if the jury did not understand the prosecutor to refer to his knowledge of facts outside the record, the jury could have construed his statements of opinion as ‘expert testimony’ based on his

personal knowledge and his prior experience with other cases.”); *see also Garcia-Guizar*, 160 F.3d at 520 (stating that a prosecutor may not inject his or her “own personal opinions” into closing argument); *United States v. Kerr*, 981 F.2d 1050, 1053 (9th Cir. 1992) (stating that a prosecutor has a “special obligation to avoid improper suggestions and insinuations. A prosecutor has no business telling the jury his individual impressions of the evidence. Because he is the sovereign’s representative, the jury may be misled into thinking his conclusions have been validated by the government’s investigatory apparatus.”). For this reason, prosecutors’ arguments not only must be based on facts in evidence, but should be phrased in such a manner that it is clear to the jury that the prosecutor is summarizing evidence rather than inserting personal knowledge and opinion into the case. This concern is heightened where, as here, the jury has, for a variety of reasons, been informed that the prosecutors were part of the investigating team.

We do not think, however, that the prosecutor is required to begin every statement during closing argument with the qualifying comment, “As the evidence showed . . .,” or “As Agent Broderick testified” The “prosecution must have reasonable latitude to fashion closing arguments.” *Molina*, 934 F.2d at 1445. The transcript of closing argument indicates that the prosecutors here generally tied their arguments to the evidence and thus argued within permissible limits.

C.

Appellants also contend it was improper vouching for the prosecutor to tell the jury that Willie Young, the cooperating codefendant, had told prosecutors that he had purchased marijuana and cocaine from Flowers. The prosecutor stated:

[Young] said consistent with what he had told Agent Broderick earlier that Anthony Flowers had distributed marijuana on occasion, and that he had already

bought — told us that he had bought cocaine from Anthony Flowers.

Because Young was never called as a witness and was not subject to cross examination, the use of the word “us” clearly refers to statements Young made to investigators and prosecutors outside of court.

The prosecutor’s statement was improper. First, it bolstered the credibility of Broderick, who testified that particular phone conversations involved marijuana and cocaine based on what Young had told him, by corroborating Broderick’s version of what Young had told investigators. It therefore constituted vouching. Second, it referred to a statement that was not in evidence and was not admissible. Although Broderick had referred to Young’s statements on cross examination to explain the bases of his interpretations of phone conversations identifying the subject of those conversations as cocaine, Young’s statements had not been introduced as substantive evidence offered for their truth.

D.

Appellants also contend the government engaged in misconduct by revealing extrajudicial evidence about Young. Young was indicted in the Emanuel Lacy case, which, like the Flowers case, involved charges of cocaine trafficking conspiracy. Young pled guilty and agreed to cooperate with the government. As we have said, Broderick relied on interviews with Young to interpret certain telephone conversations as involving cocaine.

During closing argument, the defense commented on the government’s failure to call Young as a witness. On rebuttal, the government reiterated the facts about Young that had been brought out on Broderick’s cross examination and also divulged that Young had pled guilty to cocaine trafficking in the Lacy case. As all parties agree, Young’s guilty plea was

not in evidence. The prosecutor also juxtaposed the fact of Young's guilty plea with the fact that only "cocaine residue" had been seized from Young. After stating that Young had pled guilty, the prosecutor added, "Interesting[ly,] he had no actual powder cocaine in his residence." Appellants argue that the information revealed about Young during closing argument devastated the defense argument that appellants should not have been found guilty of cocaine trafficking: if Young had pled guilty to cocaine trafficking based on only trace amounts of cocaine, then the jury could feel comfortable convicting appellants on similar evidence.

Although appellants attempt to characterize the prosecutor's argument as improper vouching, their contention is viewed more aptly as an allegation of prosecutorial misconduct for referring to facts not in evidence. During closing argument, a prosecutor may do no more than comment on facts in evidence and make reasonable inferences based on the evidence. See *United States v. Sayetsitty*, 107 F.3d 1405, 1409 (9th Cir. 1997) (stating that prosecutors may make reasonable inferences from the evidence presented at trial). That Young pled guilty and that no powder cocaine was seized from him were not reasonable inferences from the facts in evidence. Those facts were: (1) agents had seized cocaine residue from Young's residence; (2) Young was indicted in the Lacy case; (3) Young was facing sentencing; and (4) Young was cooperating with the government. Although a jury might have *guessed* the additional facts disclosed in closing argument — the guilty plea and the absence of powder cocaine — it could not reasonably have *inferred* such facts from the facts in evidence. Accordingly, the government's argument was improper.

E.

We nonetheless conclude that these errors were harmless. In applying a harmless error analysis in the context of vouching, we must determine whether it is more probable than not

that the prosecutor's conduct materially affected the fairness of the trial. *United States v. Sarkisian*, 197 F.3d 966, 990 (9th Cir. 1999). The prosecutors' statements using "we" and "us" were not so numerous and the district court found that they were not intentional; nor did they go to the heart of the case. The jury understood based on other evidence and argument that the prosecutors were involved in the investigation. The statement corroborating what Young told Broderick is more troublesome. Broderick's contested interpretations of cryptic language as referring to cocaine was central to the prosecution's case, and Broderick identified Young as a primary basis for his conclusion that those conversations referred to cocaine. But, for the reasons we have already stated, we have a fair assurance that the verdict was not substantially swayed by Broderick's disputed interpretations. The tapes themselves, as well as the physical evidence, created a strong case that the wiretap evidence referred to cocaine transactions.

Similarly, the revelation of extrajudicial facts about Young was not likely to have affected the verdict. The jury knew that Young — a tangential figure — had been indicted and was facing sentencing, and that cocaine residue was seized from him. It was clearly improper to disclose Young's guilty plea and to mention that Young had been found with only trace amounts of cocaine. We do not believe, however, that these disclosures materially affected the verdict. The taped conversations indicated that appellants were dealing in large quantities of cocaine. There is no reason to suppose that the jury would have had a difficult time convicting appellants because large quantities of cocaine were not seized from them personally, or, if it was having a difficult time so doing, that the fact that Young pled guilty when only a trace amount was found could have made their task easier. We therefore hold that more probably than not these errors did not materially affect the fairness of the trial and were therefore harmless.

Our conclusion does not change when we consider the possible cumulative effect of the errors during closing arguments

together with Broderick's improperly admitted testimony. *See United States v. Frederick*, 78 F.3d 1370, 1381 (9th Cir. 1996) ("In some cases, although no single trial error examined in isolation is sufficiently prejudicial to warrant reversal, the cumulative effect of multiple errors may still prejudice a defendant."). After our careful review of the transcripts of Broderick's testimony and the closing arguments, and viewing the case as a whole, we hold that the errors, even cumulatively, more probably than not did not affect the verdict and therefore were in fact harmless.

CONCLUSION

We conclude that the issues discussed in this published opinion do not warrant reversal. Our disposition of the remaining issues raised in these appeals is explained in the separately filed memorandum disposition.

AFFIRMED.